### MATERIAL SAFETY DATA SHEET YELLOW HDPE

Version Number 1.0 Revision Date 03/17/2005

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#### 1. PRODUCT AND COMPANY IDENTIFICATION

#### POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone<br>Emergency telephone<br>number | : | Product Stewardship (770) 271-5902<br>CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure<br>or accident). |
|--|---|---|
| Product name                               | : | YELLOW HDPE   |
| Product code                               | : | CC10067146  |
| Chemical Name                              | : | Mixture   |
| CAS-No.                                    | : | Mixture   |
| Product Use                                | : | Industrial Applications   |

#### 2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components       | CAS-No.    | Weight % |  |  |
|------------------|------------|----------|--|--|
| Titanium dioxide | 13463-67-7 | 10 - 30  |  |  |

#### **3. HAZARDS IDENTIFICATION**

#### **EMERGENCY OVERVIEW**

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure.

#### POTENTIAL HEALTH EFFECTS

| Routes of Exposure:                           | : Inhalation, Ingestion, Skin contact   |
|---|---|
| Acute exposure                                |   |
| Inhalation<br>Ingestion<br>Eyes               | <ul> <li>Resin particles, like other inert materials, can be mechanically irritating.</li> <li>May be harmful if swallowed.</li> <li>Resin particles, like other inert materials, are mechanically irritating to eyes.</li> </ul> |
| Skin  | : Experience shows no unusual dermatitis hazard from routine handling.  |
| Chronic exposure                              | : Refer to Section 11 for Toxicological Information.  |
| Medical Conditions<br>Aggravated by Exposure: | : None known.   |



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| Inhalation   | : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases doubt seek medical advice.  |
|--|---|
| Ingestion  | : Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice.  |
| Eyes   | : Rinse immediately with plenty of water, also under the eyelids, for least 15 minutes. If eye irritation persists, seek medical attention.   |
| Skin   | : Wash off with soap and plenty of water. If skin irritation persists se medical attention.   |
|  | 5. FIRE-FIGHTING MEASURES   |
| Flash point  | : Not applicable  |
| Flammable Limits<br>Upper explosion limit<br>Lower explosion limit<br>Autoignition temperature<br>Suitable extinguishing media | <ul> <li>Not applicable</li> <li>Not applicable</li> <li>Not applicable</li> <li>Carbon dioxide blanket, water spray, dry powder, foamnone.</li> </ul>  |
| Special Fire Fighting<br>Procedures<br>Unusual Fire/Explosion  | <ul> <li>Fullface self-contained breathing apparatus (SCBA) used in positiv pressure mode should be worn to prevent inhalation of airborne contaminants.</li> <li>Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen</li> </ul> |
| Hazards  | (NOx), other hazardous materials, and smoke are all possible.   |
|  | 6. ACCIDENTAL RELEASE MEASURES  |
| Personal precautions   | : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.  |
| Environmental precautions  | : Should not be released into the environment. The product should n be allowed to enter drains, water courses or the soil.  |
| Methods for cleaning up  | : Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal. Refer to Section of this MSDS for proper disposal methods.  |
|  | 7. HANDLING AND STORAGE   |
| Handling   | : Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation.   |
| Storage  | : Keep containers dry and tightly closed to avoid moisture absorption   |

POLYONE CORPORATION



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| 8. 1                              | XPOSURE   | CONTROLS / PERSO  | NAL I   | PROTECTION        |          |                |
|-----------------------------------|-----------|---|---|-------------------|----------|----------------|
| Respiratory protection            | : N       | lo personal respiratory p                               | rotectiv  | ve equipment norm | ally r   | equired.       |
| Eye/Face Protection               | : S       | afety glasses with side-s                               | hields.   |                   |          |                |
| Hand protection                   | : P       | rotective gloves.                                       |   |                   |          |                |
| Skin and body protection          | : L       | ong sleeved clothing.                                   |   |                   |          |                |
| Additional Protective<br>Measures | : S       | afety shoes.  |   |                   |          |                |
| General Hygiene<br>Considerations |           | andle in accordance with<br>Vash hands before breaks    |   |                   |          | afety practice |
| Engineering measures              |           | leat only in areas with ap<br>ppropriate exhaust ventil |   |                   | tion.    | Provide        |
| Exposure limit(s)                 |           |   |   |                   |          |                |
| Components                        | Value     | Exposure time   |   | Exposure type     | <u>,</u> | List:          |
| Titanium dioxide                  | 10 mg/m3  | Time Weighted Avera                                     | age   | T                 |          | ACGIH          |
|                                   | 15 mg/m3  | PEL:  |   | Total dust.       |          | OSHA Z1        |
|                                   | 9. PHYSIC | CAL AND CHEMICAI  | L PRO   | PERTIES           |          |                |
| Form                              | : Solid   | 1 1   | Evanor  | ation rate ·      | Not      | applicable     |
| Appearance                        | : Pelle   |   | Evaporation rate : Not applicable<br>Specific Gravity: : Not determined |                   |          |                |
| Color                             | : YEL     |   | Bulk density : Not established  |                   |          |                |
| Odor                              | : Very    | faint V   | Vapor pressure : Not applicable   |                   |          |                |
| Melting point/range               | : Not o   | determined V  | Vapour density : Not applicable   |                   |          |                |
| Boiling Point:                    |           |   | pН  | :                 | Not      | applicable     |
| Water solubility                  | : Insol   | uble  |   |                   |          |                |
|                                   | 10. 8     | STABILITY AND REA                                       | CTIV  | ITY               |          |                |
| Stability                         | : S       | table.  |   |                   |          |                |
| Hazardous Polymerization          | n : W     | Vill not occur.   |   |                   |          |                |
|                                   |           | eep away from oxidizing ecomposition, do not over       |   | s and open flame. | To a     | void thermal   |
| Conditions to avoid               | d         |   |   |                   |          |                |



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Hazardous decomposition products

: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.

#### **11. TOXICOLOGICAL INFORMATION**

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

**Toxicity Overview** 

This product contains the following components which in their pure form have the following characteristics:

| CAS-No.   | Chemical Name                        | Effect  | Target Organ                 |  |  |  |
|---|--------------------------------------|---|------------------------------|--|--|--|
| 13463-67-7                                      | Titanium dioxide                     | Systemic effects  | Respiratory system.          |  |  |  |
|   | 12. ECOLOGI                          | CAL INFORMATION   | 1                            |  |  |  |
| Persistence and degrada                         | bility : Not readily b               | biodegradable.  |                              |  |  |  |
| Environmental Toxicity                          | Chemicals a polymer mat              |   | as they are bound within the |  |  |  |
| Bioaccumulation Poten                           | tial : Chemicals a<br>polymer mat    |   | as they are bound within the |  |  |  |
| Additional advice                               | : No data avai                       | lable   |                              |  |  |  |
|   | 13. DISPOSAI                         | <b>CONSIDERATIONS</b>   | 8                            |  |  |  |
| Product<br>Contaminated packagin                | g : Recycling is<br>has the response | <ul> <li>possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.</li> <li>Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation</li> </ul> |                              |  |  |  |
|   |                                      | and disposal in accordance with applicable federal, state/provincial and local regulations.   |                              |  |  |  |
|   | 14. TRANSPO                          | ORT INFORMATION   |                              |  |  |  |
| U.S. DOT Classification                         | n : Not regulate                     | d for transportation.   |                              |  |  |  |
| ICAO/IATA (air) : Refer to specific regulation. |                                      |   |                              |  |  |  |
| IMO / IMDG (maritime                            | e) : Refer to spec                   | : Refer to specific regulation.   |                              |  |  |  |
|   | 15. REGULAT                          | ORY INFORMATION   | N                            |  |  |  |
|   |                                      |   |                              |  |  |  |



# MATERIAL SAFETY DATA SHEET **YELLOW HDPE**

| US Regulations:         OS HA Status       :: All components of this product are listed on or exempt from the TSCA Inventory.         US EPA CERCLA Hazardous Substances (40 CFR 302)         Jot applicable         California Proposition         California Proposition         STARA Title III Section 302 Extremely Hazardous Substance         Not applicable         SARA Title III Section 302 Extremely Hazardous Substance         Not applicable         SARA Title III Section 313 Toxic Chemicals:         Not applicable         Candidan Regulations:         Not applicable         Dational Pollutant Release Inventory (NPRI)         Medical Name         1344-28-1         O.14         DSL         WHMIS Classification:         Not controlled.         DSL         Mustralia AICS         Mustralia AICS         Mustralia AICS         Listed         Lique EINECS         Listed         Japan ENCS         Listed         Mitippines PICCS         Listed         Dilippines PICCS         Listed   | ersion Number 1.0<br>evision Date 03/17/2005 |       |                        |                      | Prir           | Page 5 of<br>t Date 11/17/201 |  |  |
|---|--|-------|------------------------|----------------------|----------------|-------------------------------|--|--|
| OSHA Status       : Classified as hazardous based on components.         TSCA Status       :: All components of this product are listed on or exempt from the TSCA Inventory.         US.EPA CERCLA Hazardous Substances (40 CFR 302)         Not applicable         California Proposition       :: This product does not contain a substance listed by California Prop 65. 65         SARA Title III Section 302 Extremety Hazardous Substance         Not applicable         SARA Title III Section 313 Toxic Chemicals:         Not applicable         Canadian Regulations:         National Pollutant Release Inventory (NPRI)         Memical Name         MHMIS Classification       : Not controlled.         DSL       : All components of this product are on the Canadian Domestic : Substances List (DSL) or are exempt.         National Inventories:       : All components of this product are on the Canadian Domestic : Bustances List (DSL) or are exempt.         National Inventories:       : Listed         Australia AICS       : Listed         Europe EINECS       : Listed         Japan ENCS       : Listed         Philippines PICCS       : Listed  |  |       |                        |                      |                |                               |  |  |
| TSCA Status       : All components of this product are listed on or exempt from the TSCA Inventory.         US. EPA CERCLA Hazardous Substances (40 CFR 302)         Not applicable         California Proposition       : This product does not contain a substance listed by California Prop 65. 65         SARA Title III Section 302 Extremely Hazardous Substance         Not applicable         SARA Title III Section 313 Toxic Chemicals:         Not applicable         Canadian Regulations:         Not applicable         MHMIS Classification :       Not controlled.         DSL       : All components of this product are on the Canadian Domestic Bustances List (DSL) or are exempt.         MHMIS Classification ::       : All components of this product are on the Canadian Domestic Bustances List (DSL) or are exempt.         National Inventories:       : All components of this product are on the Canadian Domestic Bustances List (DSL) or are exempt.         National Inventories:       : Listed         Augree EINECS       : Listed         Iapan ENCS       : Listed         Augree EINECS       : Listed         Augree EINECS       : Listed         Philippines PICCS       : Listed | US Regulations:                              |       |                        |                      |                |                               |  |  |
| Inventory.         US. EPA CERCLA Hazardous Substances (40 CFR 302)         Not applicable         California Proposition : This product does not contain a substance listed by California Prop 65. 65         SARA Title III Section 302 Extremely Hazardous Substance         SARA Title III Section 302 Extremely Hazardous Substance         Not applicable         SARA Title III Section 313 Toxic Chemicals:         Not applicable         Canadian Regulations:         National Pollutant Release Inventory (NPRI)         Medical Name Kelease Inventory (NPRI)       Medight & MPRI ID#         Muninum oxide       Mot controlled.         DSL       All components of this product are on the Canadian Domestic Bustances List (DSL) or are exempt.         National Inventories:         Matrialia AICS       I Listed         China IECS       I Listed         Lurope EINECS       I Listed         Japan ENCS       I Listed         Philippines PICCS       I Listed   | OSHA Status                                  | :     | Classified as hazardou | is based on comp     | onents.        |                               |  |  |
| Not applicable         California Proposition       :       This product does not contain a substance listed by California Prop 65.         SARA Trile III Section 302 Extremely Hazardous Substance<br>Not applicable       Sarean et al. (1998)         SARA Trile III Section 313 Toxic       Chemical Substance         Not applicable       Sarean et al. (1998)         SARA Trile III Section 313 Toxic       Chemical Substance         Not applicable       Not applicable         Canadian Regulations:       Not controlled.         National Pollutant Release Invertory (NPRI)       Ministration (1998)         MHMIS Classification       is All components of this product are on the Canadian Domestic Cubatrates List (IOSL) or are exempt.         Material AICS       is Listed         Australia AICS       is Listed         Inrope EINECS       is Listed         Augan ENCS       is Listed         Area KECI       is Listed         Mapan ENCS       is Listed  | TSCA Status                                  | :     | -                      | is product are liste | ed on or exemj | pt from the TSCA              |  |  |
| California Proposition       :       This product does not contain a substance listed by California Prop 65.         65       SARA Title III Section 302 Extremely Hazardous Substance<br>Not applicable       SARA Title III Section 313 Toxic Chemicals:         Not applicable       SARA Title III Section 313 Toxic Chemicals:         Not applicable       Canadian Regulations:         National Pollutant Release Inventory (NPRI)       CAS-No.       Weight % NPRI ID#         Chemical Name       CAS-No.       Weight % NPRI ID#         Aluminum oxide       I State 28.1       0.14       13         WHMIS Classification       :       All components of this product are on the Canadian Domestic Cuestances List (DSL) or are exempt.         National Inventories:       :       Listed         Australia AICS       :       Listed         Iapan ENCS       :       Listed         Apan ENCS       :       Listed         Philippines PICCS       :       Listed   | US. EPA CERCLA Hazardous                     | Sub   | stances (40 CFR 302)   |                      |                |                               |  |  |
| 65         SARA Title III Section 302 Extremely Hazardous Substance<br>Not applicable         SARA Title III Section 313 Toxic Chemicals:         Not applicable<br>Canadian Regulations:         National Pollutant Release Inventory (NPRI) <u>Étémical Name</u> <u>CAS-No.         Watter Pollutant Release Inventory (NPRI)            <u>Étémical Name</u> <u>CAS-No.         With IS Classification       :         Not controlled.         DSL       :         DSL       :         All components of this product are on the Canadian Domestic<br/>Bustances List (DSL) or are exempt.         National Inventories:         Australia AICS       :         Listed         Europe EINECS       :         Japan ENCS       :         Listed         Korea KECI       :         Philippines PICCS       :         Listed   </u></u>  | Not applicable                               |       |                        |                      |                |                               |  |  |
| Not applicable SARA Title III Section 313 Toxic Chemicals: Not applicable Canadian Regulations: National Pollutant Release Inventory (NPRI)           National Pollutant Release Inventory (NPRI)         Chemical Name       CAS-No.       Weight %       NPRI ID#         Aluminum oxide       1344-28-1       0.14       13         WHMIS Classification       :       All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.         DSL       :       All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.         National Inventories:       :       Isted         Quina IECS       :       Listed         Iapan ENCS       :       Listed         Korea KECI       :       Listed         Philippines PICCS       :       Listed  | -  | :     | This product does not  | contain a substan    | ce listed by C | alifornia Prop 65.            |  |  |
| Not applicable<br>canadian Regulations:         National Pollutant Release Inventory (NPRI) <u>Chemical Name</u> <u>CAS-No.       Weight % NPRI ID#</u> <u>Aluminum oxide</u> <u>1344-28-1</u> 0.14       13         WHMIS Classification       :       Not controlled.         DSL       :       Not controlled.         DSL       :       All components of this product are on the Canadian Domestic<br>Substances List (DSL) or are exempt.         National Inventories:       .       .       .         Australia AICS       :       .       Listed         China IECS       :       .       Listed         Japan ENCS       :       Listed         Korea KECI       :       Listed         Philippines PICCS       :       Listed   |  | rem   | ely Hazardous Substand | ce                   |                |                               |  |  |
| Variable Release Inventory (NPRI)         CAS-No.       Weight % NPRI ID#         Aluminum oxide       CAS-No.       Weight % NPRI ID#         Aluminum oxide       1344-28-1       0.14       13         WHMIS Classification       r       Not controlled.         DSL       r       All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.         National Inventories:         Australia AICS       r       Listed         China IECS       r       Listed         Japan ENCS       r       Listed         Korea KECI       r       Listed         Philippines PICCS       r       Listed  | SARA Title III Section 313 Tox               | kic C | Chemicals:             |                      |                |                               |  |  |
| Chemical Name       CAS-No.       Weight %       NPRI ID#         Aluminum oxide       1344-28-1       0.14       13         WHMIS Classification       :       Not controlled.       13         DSL       :       All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.         National Inventories:       Australia AICS       :       Listed         China IECS       :       Listed         Japan ENCS       :       Listed         Korea KECI       :       Listed         Philippines PICCS       :       Listed  |  |       |                        |                      |                |                               |  |  |
| Aluminum oxide       1344-28-1       0.14       13         WHMIS Classification       :       Not controlled.         DSL       :       All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.         National Inventories:       Australia AICS       :       Listed         China IECS       :       Listed  |  | se Iı | nventory (NPRI)        | CAS No               | Weight %       | NPRI ID#                      |  |  |
| DSL:All components of this product are on the Canadian Domestic<br>Substances List (DSL) or are exempt.National Inventories:.Australia AICS:China IECS:Europe EINECS:Japan ENCS:Korea KECI:Philippines PICCS:Listed   |  |       |                        |                      |                |                               |  |  |
| DSL       :       All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.         National Inventories:       :       :         Australia AICS       :       :         China IECS       :       :         Europe EINECS       :       :         Japan ENCS       :       :         Korea KECI       :       Listed         Philippines PICCS       :       Listed  |  |       |                        |                      |                |                               |  |  |
| National Inventories:       Substances List (DSL) or are exempt.         National Inventories:       Australia AICS       :         Australia AICS       :       Listed         China IECS       :       Listed         Europe EINECS       :       Listed         Japan ENCS       :       Listed         Korea KECI       :       Listed         Philippines PICCS       :       Listed   | WHMIS Classification                         | :     | Not controlled.        |                      |                |                               |  |  |
| Australia AICS:ListedChina IECS:ListedEurope EINECS:ListedJapan ENCS:ListedKorea KECI:ListedPhilippines PICCS:Listed  | DSL  | :     |                        |                      |                |                               |  |  |
| China IECS:ListedEurope EINECS:ListedJapan ENCS:ListedKorea KECI:ListedPhilippines PICCS:Listed   | National Inventories:                        |       |                        |                      |                |                               |  |  |
| Europe EINECS:ListedJapan ENCS:ListedKorea KECI:ListedPhilippines PICCS:Listed  | Australia AICS                               | :     | Listed                 |                      |                |                               |  |  |
| Japan ENCS:ListedKorea KECI:ListedPhilippines PICCS:Listed  | China IECS                                   | :     | Listed                 |                      |                |                               |  |  |
| Korea KECI:ListedPhilippines PICCS:Listed   | Europe EINECS                                | :     | Listed                 |                      |                |                               |  |  |
| Philippines PICCS : Listed  | Japan ENCS                                   | :     | Listed                 |                      |                |                               |  |  |
|   | Korea KECI                                   | :     | Listed                 |                      |                |                               |  |  |
| 16. OTHER INFORMATION   | Philippines PICCS                            | :     | Listed                 |                      |                |                               |  |  |
|   |  |       | 16. OTHER INFOR        | MATION               |                |                               |  |  |
|   |  |       |                        |                      |                |                               |  |  |



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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material when used in combination with any other materials and/or in any particular process or processing conditions.